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## Article

# Jogging during the Lockdown: Changes in the Regimes of Kinesthetic Morality and Urban Emotional Geography in NW Italy

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**Abstract:** Jogging is the most practiced physical activity in the west. This form of light running appears a solution to the health problems caused by the sedentary of contemporary dwelling and affirmed the role of the extensive use of urban space as a key to individual well-being and health. The COVID-19 pandemic and the imposition of lockdowns imposed a new form of kinesthetic morality based on domestic confinement; a morality that is in open contrast to that of jogging. The article explores this conflict and its consequences in terms of perception of the urban environment and the society among joggers. Based on case study research conducted in 2020 in Alessandria, NW Italy, this study delves into this abrupt change and explores how the urban spatiality changed for the joggers. In so doing, it asks what this event teaches us about the development of new, more effective, urban policies.



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**Keywords:** jogging; COVID-19; emotional geography; lockdown; urban ethnography; Italy

## 1. Introduction

### 1.1. COVID-19 Pandemic and the Experience of Urban Space

Since its beginning, the COVID-19 pandemic has appeared to be a phenomenon that can rewrite the consolidated geographies of social relations, exacerbating existing inequalities and requiring communities to revise their daily practices in a radical way [1]. On a local level, the implementation of mobility restrictions, the so-called lockdowns, and the fear of contagion had a deep effect on individuals and communities and their use of private, public, and third spaces [2]. This reverberated in the quality of the inter-relationships between people and their surroundings and interpretations of the landscape, so that the virus appeared, as Vannini [3] has suggested, to be an atmospheric disease: an invisible circumstance that reshaped familiar places into an uncanny and uncertain landscape. If space is made above all from “complex compositions assembled out of bodies, materialities, scenes, events, and the substantial micropolitics of force fields saturating everything from institutions to collective mood” [4], the pandemic obliged individuals and communities to reshape their worlds and reassemble their everyday lives. In so doing, even the most mundane practices changed their meanings, with the design of a new regime of sign—the collective assemblage of enunciations that defines the individual and collective understanding and guides the acting in the world [5]—which shaped the experience of the pandemic.

The lockdowns put in place by many countries to counteract the spread of the pandemic involved, among other things, limitations on access to public spaces and bans on gatherings. Physical practices that involve the use of public facilities or access to public spaces were particularly affected, among these was jogging.

### 1.2. Jogging and the Experience of Urban Space

Jogging is an intrinsically non-agonistic form of running: There is the famous definition of Sheehan [6], who suggested that the only distinction between jogging and running is “a signature on a race application.” Jogging is a slow run, at less than 15 km/h, and is largely practiced in urban contexts on a daily or weekly basis. It was codified in the USA in the 1960s and links its success to the spread of the fitness movement that occurred in the period after the Second World War, which contributed to the raised awareness of the link between physical practice and expectation of better health, particularly among the middle class. The success of this bodily activity [7] connected with a deeper sense of redemption felt by a generation and a class during a period of economic and political insecurity; this understanding reverberated in the public debate [8]. As Gillick suggests: “running had appealed to politicians and businessmen in the sixties to cardiovascular health. But exercise had also been seen by some as part of a program in better living that was to be the first step towards the spiritual renewal of America” [9].

Over fifty years, jogging has secured a central role among the most commonly practiced physical activities, being able to provide a simple way to fulfil what Bauman [10] refers to as the tacit duty of fitness that characterizes contemporary western society. In fact, unlike other practices, it can be performed individually and does not require the use of specific facilities or expensive equipment. It can be easily conducted in the surroundings of one's home, by running along roads with less traffic, or sidewalks, pathways, or dirt roads. In this respect, jogging, as with other sporting practices such as cycling [11], can foster a deep kinesthetic involvement with the jogger's surroundings [12], due to the alternative to the ordinary use of the urban landscape. In this respect, it produces a new emotional geography of the city.

Dunlap et al. [13] showed that, when cycling in Nashville, individuals develop an alternative perception of the metropolitan environment, an enhanced connection to place, and a comparative sense of control and autonomy: They find an emergent emotional geography—the affective connections to space through experiences [14]—for the city that intimately and relationally connects people and place. While, as suggested by Augé [15], the bicycle, among the modern locomotive vehicles and in contrast with cars, is the vehicle that is able to create the deepest relationship between the driver and the surroundings, running, as with walking, represents one of the most ancient practices through which people have made sense of the world they live in, expanding their knowledge [16]. In this respect, in a similar but more intensive way to other physical practices, the experiences linked with jogging offer the opportunity of exploring not just the relationship between people and the city, but the transformation of the livability of the city [17,18]. Thus, in a peculiar context such as that of the pandemic, jogging opens a window to understand how the relationship with the city can mutate in the context of a crisis, generating a new emotional geography for the city and transforming the ordinary affects [19] that substantiate the urban environment.

### 1.3. Jogging and COVID-19 in Italy

This article investigates this window by focusing on Italy, one of the most affected countries in the early months of the pandemic and the first western country to adopt a national lockdown to stem the spread of the virus between March and May 2020.

While early cases of COVID-19 were recorded in Italy from 30 January 2020 onwards, the first hotspot was found in Lombardy on 20 February. The contagion spread fast across the region, and, on 25 February, the national government adopted extraordinary measures to restrict mobility on a local and international level: from suspending all direct flights to and from China to instituting quarantine zones, the so-called “Red Zones”, to isolate the municipalities in which there were hotspots. These measures did not stop the contagion, however, and it engulfed the entire north of Italy. On 7 March, the government announced the extension of the mobility restrictions that had been imposed in the Red Zones to the territories of 14 provinces in the northern part of the country. On 11 March, the lockdown

was extended to the whole of Italy: This was the beginning of Phase 1, which ended after two months, on 4 May. During Phase 1, all retail trade was suspended, with a few exceptions such as food stores and newspaper sellers. Schools, restaurants, bars, theatres, and cinemas, together with most industries and public offices, were closed. Only those firms working in strategic sectors, such as health and care, food businesses, and agriculture, could continue with their activities. Mobility was restricted. People could go out of their homes only for quick shopping, medical treatment, or to travel to work. The severe national measures were further intensified in the north by the regional government, to cope with the rampant medical emergency.

During the lockdown, the political debate gave a great deal of attention to the area of sport and physical activities, and to jogging specifically. This prominence can be explained looking at the role played by this practice in the country. While jogging spread in these circumstances in the United States in the 1960s, it was introduced in Italy at the end of the 1970s [20]. In a context of the reduction of physical activity at work [21], since the 1990s, it has been the most commonly performed physical activity in the country, with over half of the active population jogging at least once a month, and 10% of the active population doing so weekly [22]; these joggers are mainly men (55%), and over 50% of them are aged between 30 and 60 [23]. During the lockdown, while parks, gyms, and swimming pools were closed, and cycling was banned, the only sporting activity allowed was jogging, although only in the proximity of one's home (regional governments adopted specific acts to fix the maximum range for a jogger, e.g., 200 m, 500 m, 1 km, and the use of personal protection devices, such as face masks).

Despite this authorization and legitimation, starting from the first week of lockdown, the national press started reporting a growing number of attacks suffered by joggers and runners across Italy. These episodes involved TV celebrities, professional athletes, and ordinary people, and occurred across the country in both large and small cities: episodes that hinted at a profound change in the attitude of society towards this physical practice and those who engage in it.

#### *1.4. The Study Location*

Thus, the lockdown coincided with the emergence of a new, contradictory emotional geography of the city for joggers. It was marked by the interlacing of a formal legitimation of their practice, the imposition of unprecedented heavy restrictions that affected the possibility of practicing it, and an increased social pressure. This new landscape opens questions about how joggers adapted to the new geography as well as how they changed their perception of this physical practice and the ways of practicing it. The article ethnographically explores these issues by focusing the anthropological spyglass on a specific case study [24] of an Italian middle city Alessandria.

Alessandria is the thirty-seventh largest municipality in Italy (out of a total of 7904). It covers 203 km<sup>2</sup>, and has a population of around 92,000 inhabitants, with an average age of 47.5 years. The city, established in the twelfth century CE, lies on the plain created by the confluence of the rivers Tanaro and Bormida. It is an hour's drive southwest of Milan, on the border between Piedmont and Lombardy (Figure 1). Its position has made Alessandria a fundamental military and logistical center since the eighteenth century, creating a strong interconnection between the economy of the city and those of the three largest centers of Northwest Italy (Genoa, Milan, and Turin) [25–27].

In the period since the Second World War, the city has enriched its sports scene, and now hosts both professional and semi-professional sports clubs (e.g., Alessandria Football Club plays in the national third division, and the rugby team plays in the national second division). Moreover, Alessandria has numerous gyms, dojos, swimming pools, and sports centers. It is a city of Olympic and Paralympic runners such as Valeria Stranio and Roberto La Barbera. Thus, sports, and physical activity in general, are common practices in Alessandria and, since the 1970s [28], they have been at the center of the local political and public debate concerning the development of the city. Since the 1990s, jogging has gained

prominence; this role is marked by the success of Stralessandria, an annual charity event that includes a competitive 6 km run and a non-competitive run/walk through the streets of the city center. Stralessandria has been organized from 1995 onwards, and there were over 10,000 participants when it was most recently held, in 2019 ([www.stralessandria.it](http://www.stralessandria.it)). While it is possible to meet joggers around the city, one of the favorite places for jogging is along the embankments of the Tanaro river: early in the morning and particularly at the end of the day one can count several people jogging along the 10 km track. Other favorite places are on the peripheries of the city, such as in the industrial area D3, in the western outskirts, or in the rural suburbs, such as around Valle San Bartolomeo.



**Figure 1.** Localization of the study area.

### 1.5. Objectives

Through the exploration of the ethnographic case study, the article answered to the following research questions:

- How did COVID-19 change the livability of the city?;
- How did the lockdown change the meaning of a cultural physical practices in an urban environment?;
- How did the lockdown change the understanding of the city environment among the joggers?; and
- How did the clash between opposing kinesthetic moralities develop for the joggers?

## 2. Materials and Methods

The article is a result of the collective effort promoted by the researchers of the University of Gastronomic Sciences to reflect on the causes of the COVID-19 pandemics [29], and explore its impacts on the local and global population. In this respect, a particular focus was on the effects of the lockdowns on the lifestyle of Italians [30] and their relationship with the urban environment [31].

Considering the numerous episodes of attacks suffered by joggers and runners across Italy, in both large and small cities, during the first lockdown [32], the research focused on exploring, ethnographically, the experiences of joggers in the period. In fact, these

episodes, which involved TV celebrities, professional athletes, and ordinary people, hinted at a profound change in the attitude of society towards this physical practice and those who engage in it. The research investigates how joggers perceived this change and how it influenced their practice as well as their understanding of the urban environment.

In so doing, the research focused on the case study of Alessandria. Case study research, as explained by Yin [24], offers an easy access to emerging social phenomena. Although this approach is often at the basis of ethnographic studies of bounded communities, a back-bone of anthropological research [33], it also allows comparative studies [34]. In this case, the case study method was used as exploratory heuristic strategy of a phenomenon conducted during its emergence.

Fieldwork was based on a campaign of in-depth interviews conducted between March and June 2020 (between March and April the interviews were conducted via phone or digital platform, from May to June they were conducted face-to-face due to the loosening of lockdown restriction).

Twenty-eight joggers were interviewed (15 men, 13 women; 14 between 30 and 40 years of age, and 14 between 41 and 63 years of age). Although the sample was not constructed to achieve perfect statistical representativity, it aimed to encompass people who have been consistently engaged in jogging in recent years, practice jogging at least 2–3 times a week or more, and have also participated in non-competitive events, such as Stralessandria. It mirrors the overall gender, and age distribution in this sector (60% men, 80% over 35 years of age; see [35]).

Considering the absence of organized groups or associations of joggers in Alessandria, the interviewees were selected by snowball sampling [36], starting from joggers met before the lockdown, and from them expanding the reach of the research including people who lives in all the neighborhoods of the city.

The campaigns were structured to allow a comparative case study analysis [37]. In particular, the interviews were conducted using the same semi-structured format, which involved questions aimed at investigating the relationship with jogging, the motivations linked to the practice, the impact of lockdown to their lives, the ways in which they reacted to the limitations in terms of their jogging practice. All the interviews were structured according to the life story method considering the effectiveness of this interviewing method in terms of exploration of individual's affectivity and perception of the world [38]

The research was conducted according to the ethical guidelines of the American Anthropological Association (Principles of Professional Responsibility). Informed consent was obtained from all subjects involved in the study. Interviews were recorded transcribed in an anonymized form. The names of the research participants, their sensitive data, as well as the names of places have been anonymized. Only the anonymized transcripts were conserved by the researcher.

The transcripts were entered into NVivo qualitative data analysis version 12.5.0 (QSR International, Melbourne, Australia), to conduct a thematic analysis of the contents [39] aimed at identifying the key elements concerning the change in perception of jogging and the urban environment during the lockdown. The result allowed, first of all, the elaboration of qualitative overview of the emerging phenomenon (see Table 1), identifying five dimensions of change that affected the practice (change in place where to jog, change in the range run, change in time of the day when running, change in duration of jogging session, interruption of the practice) and the occurrence of three forms of incidents (being insulted by bystanders, being physically assaulted, or being halted and/or fine by policemen). This overview was then complemented with a tale of the field [40] weaved by integrating the information coming from the interviews with data collected with participant observation [41] and autoethnography [42]<sup>1</sup> conducted in the years prior the lockdown in the area, as well as the direct experience gained as a jogger and as a member of the working group of the National Association of Italian Municipalities focused on the implementation of urban health policies. Following the example provide by Bourdieu [43], the ethnographic account was structured by focusing on the life stories of few joggers who well explain the meanings

of behavioral changes and the trajectories concerning the change in perception concerning the environment.

**Table 1.** Summary of the impact of the lockdown on the jogging practices of the informants.

Id.	Age Group	Change	Incidents
1M	30/40	Interruption	None
2M	30/40	Location, Range	Insults
3M	30/40	Range, Duration	Police
4M	30/40	Interruption	None
5M	30/40	Range, Duration	None
6M	30/40	Location, Period	Insults
7M	30/40	Interruption	Insults
8M Luca	41/63	Interruption	Insults
9M Francesco	41/63	Period	Police
10M Simone	41/63	Range	Insults
11M	41/63	Interruption	None
12M	41/63	Interruption	None
13M	41/63	Range, Duration	Insults
14M	41/63	Location	Insults, Attack
15M	41/63	Interruption	Insults, Police
16F Laura	30/40	Range, Location, Period	Police
17F	30/40	Interruption	None
18F	30/40	Location, Period	Attack
19F	30/40	Range, Duration	None
20F	30/40	Interruption	None
21F	30/40	Interruption	Police
22F	30/40	Range, Period	Police
23F Maria	41/63	Interruption	Insults, Attack
24F	41/63	Range, Duration	Insults
25F	41/63	Interruption	None
26F	41/63	Range, Duration	None
27F	41/63	Range, Duration	Insults
28F	41/63	Interruption	None

### 3. Results

#### 3.1. The Role of Jogging

*“For me, jogging means freedom. It allows me to undress from my everyday life. I take off my jacket and my tie and put on one of those absurd sports shirts. No cell phone. No wallet. I jump on the street and am alone with my thoughts. I listen to the noises of the city and the countryside. It’s hard to say in words, but that’s why I love to jog every day. It’s my salvation or at least it was before the COVID [pandemic]. Before the lockdown I always felt free when I jogged. Then it became different... the very city was different... and I found I was asking myself ‘Am I wrong? Am I the enemy of the people? Or is it the city turned into a hostile place?’”*



Luca is one of the joggers I met during my research. He is a bank clerk in his forties, who arrived in Alessandria after university when his company transferred him to work in the local branch and began running in the mid-2000s. He loves jogging, and his deep relationship with this physical practice opens an ethnographic window for investigating the deep transformation that the recent COVID-19 pandemic has brought in the relationship between the urban environment and its dwellers [44].

All my informants link jogging with an overt demand for fitness and well-being in a context of the increasingly sedentary nature of the daily routine. “Look, I need to do some [physical] activity”, “I jog because it makes me feel good”, and “I need to do some exercise and jogging is cheap and works with me and my daily routine” are some of the most recurrent comments. Among the interviewees, only five have labor-intensive jobs (two factory workers, one craftsman, and two working in medical professions); the others are clerks, public officers, teachers, or workers in other jobs that require little physical activity. Jogging is often described in contrast to other forms of physical practice, such as gym training or participation in team sports (such as football or basketball), highlighting the overall practicality of this practice and its affordability. This is the case for Laura, a cook in her late thirties, who explains:

*“I started jogging five or six years ago when I changed jobs. Before I worked in a shop and with shifts, I managed to go to the swimming pool most days. Since I started working in the restaurant sector I started commuting to [a nearby town]. There is no swimming pool there and I could not put the times together to go every day to the swimming pool in Alessandria. So, I decided to start running every day. For better or for worse, I manage to go running every day in the morning, one hour. It makes me feel good and I don’t have big-time problems.”*

Other interviews echo Laura with their comments: “You just need a decent pair of shoes to jog: no extra fees or hidden costs”, “If you want to jog, you do not depend on the working hours of a gym: it’s just about you”, “You can jog any time, when fits better with your schedule. And you can jog with your friends too.” Thus, jogging appears to leak into the life of the practitioners as an interstitial practice that fills the gaps in their daily schedules, and slowly to assume centrality in their routines, being recognized as an important aspect of their well-being, and, occasionally, their social life. This is what Maria, a teacher in her fifties, says:

*“I started jogging twenty years ago. I was twenty-five or so. From jogging then I started to participate in some non-competitive races, such as Stralessandria. Jogging is my way to relax after a day in the office. Taking part in these competitions amuses me because I team up with friends. To meet with friends for running is important. Every week, before the pandemic, on Saturday afternoons, I and other friends went for a run. Sometimes just outside the city, we took the car and went to some new places in the countryside. For me, at the end of the day, jogging is to live the space of the city and the countryside and share emotions with the people who run with me.”*

Like Maria, other respondents recognize jogging as a different form of urban mobility that pushes them to experience different spaces from those they use otherwise. Luca puts it this way:

*“I started jogging a few years ago; it must have been 2015. [...] It is often the only real physical activity I do [...]. I work in an office: hours in front of the computer. The most I walk is from home to the garage and from the parking lot to the office. I need to run; it’s freedom and well-being for me. Before, Alessandria was for me just the street from home to work and another bunch of places and shops. Since I have started jogging, I have known new places, such as the hamlets around the city, or the hills just beyond the river. I also met new people who jog like me every day on the embankments.”*

Jogging, therefore, is linked to an expansion of the daily horizon beyond the boundaries of the domestic places or those of work to involve new spaces, and potentially new



relationships. It draws an emotional geography that, as is expressed by some informants, is based on the sense of “decompression”, “freedom”, and “escape”. An example is Francesco, an engineer in his fifties:

*“My wife and I are both professionals and, in the evening, when we are back from the office, we go for a run in the countryside. We both run. It is something we do mostly two or three times a week and it is our way to escape from the city and it makes us feel good.”*

This geography includes and expands the lived space. It involves streets, squares, and avenues often traveled by car or when walking on errands. It also includes new places inside Alessandria, such as parks and alleys, or places immediately outside it, such as the embankments or country roads that are otherwise unknown and unused. Overall, therefore, jogging is linked with a sense of empowerment and fulfilment: a dimension that has been severely hit by the pandemic.

### 3.2. The Experience of the Lockdown

The lockdown coincided for all the informants with a sudden change to their physical activity. The restrictions on mobility included a halt to most of their commercial activities. “There was nobody around the city: no cars, no people. The only people one could meet were policemen, people walking their dogs and some joggers like myself.” These memories of one of the interviewees living in the city center are confirmed by the photos and videos still circulating online, and, in particular, by those published in a book, “Il nemico invisibile”, “the invisible enemy”, sponsored by the municipality of Alessandria together with many local industrial companies, such as Guala Closures Group, 3i Group and Eurocap [45]. During the whole period of the lockdown, people jogged. In fact, although jogging was not officially completely forbidden, its possibilities were drastically reduced, with limited access to public places such as parks or to locations away from one’s home. The weight of these restrictions was emphasized by all the informers. They pointed to them as constrictions that reduced the sense of freedom and enjoyment associated with jogging. However, the restrictions were not what affected the informants most. The lockdown generated public hostility toward jogging. Luca explains this point and its consequences:

*“I usually run at 6.00/6.30 AM. If I meet someone it is some animal or possibly someone from my condominium (I live in a condominium). March and April were tough. Even before the most stringent obligations, people have changed. It didn’t matter if I had a mask or whatever. For the first time, I realized that people were looking at me. A neighbor, one day, started shouting at me from the balcony: “Bastard! You want to kill us all!” The thing repeated for some days. Then, I started going to run earlier; at 5.00, in order not to meet anyone, but still, I did not feel safe. I felt like they had put me in a cage. In the end, I bought a treadmill and for almost a month I didn’t put my nose out of the flat.”*

The hostility was not limited to verbal assault, as Maria remembers:

*“My jogger quarantine experience? A bucket of cold water at the beginning of March. I don’t speak metaphorically. It was still more or less allowed to go for a run. I leave the house to do my usual run. I go under various condominiums and shops. I usually go around 7.00 in the morning and it’s not like there are all these people. Well ... I was running and: “splash!”. From the second floor, a man threw a bucket of water over me. I almost had a heart attack. Was it a joke? No. He shouted at me: “You should be ashamed running these days! Stay at home!” I didn’t do anything. I didn’t say anything. I left, running. What could I do? Should I denounce him? For what? After that day, I hung up the boots. Once and for all after that episode. Well, more or less. Sometimes I got up before dawn and went around a few blocks ... but I felt I was moving in a hostile landscape; not because of the virus. Because of the people around me.”*

As happened in other cities, the interviewees lamented the sudden transformation in the public attitude towards this practical activity: “The day before we were good people

interested in our health, the day after we were a public enemy,” one of the informants said in summary. Joggers directly experienced the hostility of neighbors and bystanders, being repeatedly insulted (10) or being physically assaulted (3). The cause of such hostility was found in a mixture of envy and fear of contagion: an attitude that stemmed from the characteristics of the historical moment, as remembers Simone, a fifty-year-old public employee:

*“It was a horrible time. Every day, we received new decrees that instituted new prohibitions we, as public officers, had to enforce and make people respect. Most of the time, the norms appeared to contradict the ones of the day before. Every day, newspapers and television spoke only of death and contagion. We reach a level of collective delirium. Everyone was looking at everyone else as a possible enemy, a plague carrier. Let alone, what people should have thought seeing us, four idiots running around the neighborhood in multicolored shirts. I can understand why some yelled at us or told us that we were criminals. Try to explain to them that we weren’t hurting anyone. I continued jogging during the lockdown, around my home... but it was quite shitty. It was not real jogging. We were in a cage even if we can technically run. That’s for sure.”*

Faced with the impossibility of carrying out the physical practice in their usual ways and perceiving an increasing pressure, the joggers changed their habits. Like Maria, some of the joggers (13) stopped practicing jogging until the end of the lockdown. Others (15), like Simone, chose to continue. To do so, they had to change the ways in which practicing the activity. In particular, they had to revise their usual route, reducing its range to the proximity of their house (10) abiding the current anti-COVID-19 regulations. This change was commonly linked with a reduction of the duration of their sessions (8). However, the change was also coupled with the decision of moving their practice in different, interstitial spaces (4) and times (5). This was the case for Laura and Francesco:

*“During the lockdown, I continued to work. [... However,] tension and fear were high: a dozen colleagues were affected by the disease or had close relatives affected. [...] When I got home, I needed to be distracted; I needed to move [recalls Laura]. As far as I could, I kept jogging [... but] when they put the obligation to run within a few meters from home, I started going around the block. I felt like an idiot, but I continued for a few days. Then the police stopped me. They were about to fine me because I was jogging. We discussed for a good ten minutes before they understood I was just jogging around my block. I read about other joggers being stupidly fined on the internet and I read about people who were starting to run up and down the stairs of their buildings. I live in a ten-story building. I started doing it too: up and down, up, and down. I did not use my shoes because I did not want to bother my neighbors too much. I ran with two pairs of socks to make no noise. There was certainly someone else in the building who ran on the stairs during the night because I could hear the rushing up and down. In the end, I made the stairs go well. In May, the first time I was able to run on the street again without fear of being fined or insulted, I started to cry with happiness.”*

*“During the lockdown we [Francesco and his wife] worked mostly from home [...]. We live outside the city and there are just fields and a few farmhouses around. Thus, we felt we could go jogging without a big fuss. However, in April, we were blocked twice by policemen in civilian dress, and we reckon they were patrolling the area now and then. So, we decided to change time. We started going out in the dark, very early in the morning. We fixed our alarm at 4.30 and we went out. It was crazy, I know...”*

Overall, the lockdown is associated with a sense of “oppression”, “imprisonment”, “suffocation”, “narrowness”, “constant wariness”, and “discomfort”. In this respect, despite a limited number of interviewees that experienced assaults of a sort (3), two were the main factors that intensified and give concreteness to this sense of oppression: the insults received by bystanders and neighbors (8) and the intensified controls made by policemen (5). In some cases (5) these events led to the halt of the practices. In order to describe the situation

experienced, the joggers sometimes use metaphors, such as: “I felt like Alice in Wonderland. Suddenly my world has shrunk, and I felt as usual but was not able to move anymore”.

While all the joggers linked the lockdown with a sense of oppression, the disease only had a marginal or accidental role in their narratives, despite Alessandria being severely hit by the pandemic during the lockdown, with more than 600 people dying of COVID-19 between March and May 2020. Contracting the virus was a possibility recognized by all the interviewees, but none of them linked it to the practice of jogging. Conversely, it was common to exclude the possibility that the physical practice was risky (e.g., “I understand there may be the need to stop mobility, but do you really believe I risk catching the virus by jogging alone in a street? Do you think it is more possible I would do it when queuing in front of a supermarket?”). Despite the circumstances, the association between jogging and good health remained strong, if not reinforced, making the physical practice a sort of COVID test in a period when medical tests were not commonly available to the population (e.g., “Do you really think that if I had COVID I would be able to run every day for over 30 minutes?”), and a way to establish and maintain a sense of security in a context of severe uncertainty (“To jog every day, even only around the block, was my way to tell myself ‘everything will be ok’”).

### 3.3. The Experience of the End of the Lockdown

The interviewees experienced the end of the lockdown as a strongly emotional moment linked with a sense of reappropriation of agency and legitimation: “It was beautiful, I finally ran through places I took for granted, I could move and breathe”; “I felt whole again”; “I thought I couldn’t run for miles again without feeling like a criminal.” Despite this, the moment was also tainted by wariness about another possible lockdown, as actually occurred a few months later, and by mistrust for the people surrounding them: “After what they did during the lockdown, I cannot see my neighbors in the face without thinking: look at that #####!”

Overall, jogging, for those who continued to practice it during the lockdown, appeared to be a device [46] used to secure a sense of normality in a context of exceptionality. Through it, in a regime of limited mobility, the joggers attempted to appropriate to themselves a contested spatiality, jogging in public spaces, as well as occupying interstitial areas perceived to be free from risks or surveillance. The circumstances marked a shift in the meaning and role given to this physical practice by the joggers. All those who continued, about a third of the interviewees, answered in a similar way to the conclusions Luca draws in his interview:

*“Well... normally I jog because I feel better... it is for my health... During the lockdown it was different. It was not simple, and I did not feel freedom by jogging during the lockdown. However, it was a way of still feeling in control of my life in a moment of... well... when everything appeared out of control.”*

## 4. Discussion

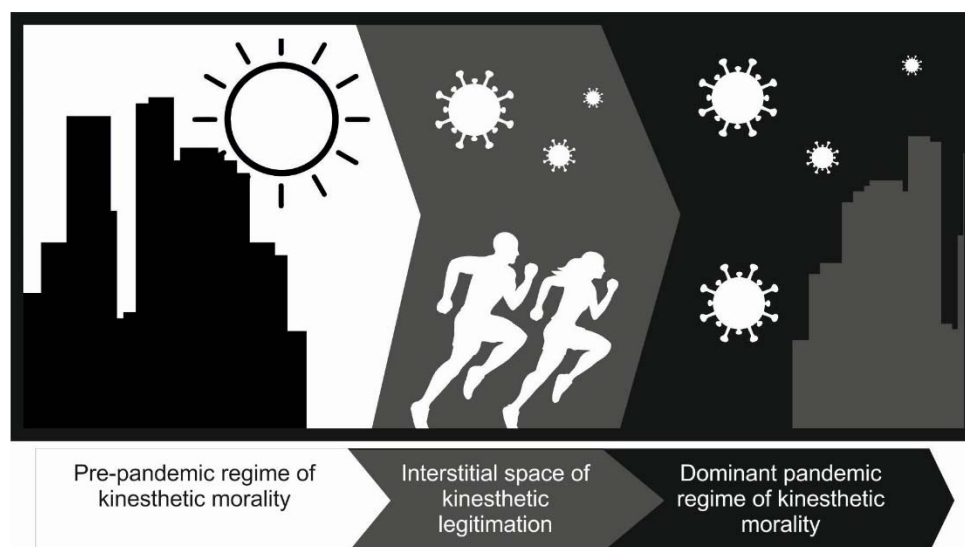
The research shows the abrupt change in the daily life of the informers; a transformation that is linked both to the change in their daily practices and to a radical transformation of the daily urban landscape in which informers have lived.

The change imposed by the COVID-19 pandemic was above all relational [3], and related to the engagement with public and public spaces. This change is, however, substantial, since the geography of a city should not be understood only as a static assemblage of buildings, but rather, as Thrift [47] points out, as an emergent phenomenon described by the spatial and temporal relationships that are developed within it. Thus, the COVID-19 pandemic brought to the emergence of a new, specific urban geography in Alessandria as in the rest of the world [1]. It is marked by a radical transformation in the kinetic structure of the urban context expressed by the prohibition of the use of common, public spaces and by the obligation to domestic reclusion. In this new context, individuals tried to adapt their everyday habits and practices. This adaptation, however, was difficult and meaningful.

As Bourdieu [48,49] pointed out, any form of physical practice is a sociocultural action through which the individuals both embody social values and norms and reproduce and disseminate them. In this respect, any physical practice, such as jogging, refers to a regime of kinesthetic morality deeply situated in a social and historical context. As a regime of kinesthetic morality, I refer to the set of formal and informal, implicit, and explicit norms that define the meaning of physical practice and determine its public acceptability. The lockdown coincided with an abrupt shift in the regime of kinesthetic morality associated with jogging.

Before the pandemic, jogging became popular as a fitness practice aimed at achieving well-being for an individual by addressing instances of caring for one's body in a context of increasingly sedentary lifestyles, since it promotes extensive use of the landscape based on the pedestrian's fruition of urban and peri-urban space [8]. Jogging, thus, expressed a regime of kinesthetic morality that placed at the center of the daily life of the individuals a form of self-care based on regular physical practice and the refusal of domestic sedentariness. In this respect, this morality nurtured an idea of "good citizenship" [50] based and dependent on the persistent use of the public space experienced by jogging. This understanding, thus, reverberated in public policies of urban health [51] aimed at promoting forms of physical activities, such as jogging, northern walking, and running. Similarly to the process described by Wacquant [52] in the case of boxing, constant practice and its enjoyment embedded jogging in the everyday life of the informants embodying the dominant pre-pandemic kinesthetic morality.

The insurgence of the COVID-19 pandemic brought a sudden change in this moral regime epitomized by the motto "Stay at Home" (Figure 2). The enforcement of the lockdown imposed a new idea concerning health that had at its center the abandonment of the public space. Public health, during the pandemic, was achieved by remaining home and embracing a new form of forced domesticity and sedentariness. Consequentially, this new regime of kinesthetic morality depicted all who infringed the obligation as possible vehicles for the spreading of the virus, thus a public menace.



**Figure 2.** Graphical representation of the sociocultural transformation experienced by the joggers.

Although the legislation of the lockdown did not completely ban jogging, the lockdown marked a shift in the public understanding of this practice that made joggers transformed from examples of good citizens into public enemies. At the same time, the lack of a complete ban created an uncertain grey area of legitimization that some of the joggers tried to use as a space to continue their practice. It is in this attempt the joggers expressed

their embodied pre-pandemic regime of kinesthetic morality living the conflict between opposite regimes.

In face of a hostilized environment, the respond of the joggers was fluid. On the one hand they withdrew from the contested space and abandoned the practice. On the other, they moved more and more the practice into interstitial times and spaces less in the spot of the public eye where they felt to be more secure, such as the condominium stairways or the hours before dawn or after twilight. Thus, overall they accepted the new regime of kinesthetic morality or attempted to find ways to avoid open conflict, waiting for the emergency to end.

The experience of this moral conflict was directly linked with the joggers' experience of the change in the urban environment. The pandemic marked a shift of their urban emotional geography. Following Tuan [53], the concept of emotional geography describes the understanding of the environment emerging from its emotional and bodily experience. The pre-pandemic urban emotional geography of joggers derived from the bodily self-awareness as well as the deeper understanding of the urban space this physical practice produces [54]. It was linked with the idea of freedom that coupled with the belief of doing something able to make them achieve their personal well-being. Moreover, insofar as jogging was promoted by public policies and the media as a respectable activity, they felt supported and reinforced in their practice.

The enforcement of the lockdown imposed a stringent limitation of the use of the public space. However, the new, emergent emotional geography was not affected mainly by the quantitative restrictions, but rather the qualitative change in the possibility of using the public space due to the increasing social pressure perceived. The new geography was, thus, linked with a complex bundle of emotions. Doubts, perplexity, and preoccupation marked the emotional geography of the lockdown. They delimited a shrinking space whose boundary stiffened under the pressure of increasing police controls and the brewing hostility that surrounded the joggers. The emerging result was marked by a sense of compression, an affect that "create[s] the very effect of the surfaces or boundaries of bodies and worlds" [55] of the pandemic geography.

In their strenuous attempts to maintain their pre-pandemic daily routines, however, the joggers demonstrated their fear of being overwhelmed by the insurgent situation; and in the perception of the hostility of their surrounding world, they express the weakening of their social ties, strong and weak [56], in the face of social distancing obligations. This appears the faces of the atmospheric dis-ease" [3] that engulfed Italy: an emotional geography of crisis.

Walby [57] defines a crisis as "a moment when there is the possibility of large-scale change consequent upon a small event in a narrow-window of time." She also suggests that crises differ in their consequences: "The crisis leads to a system breakdown; after the crisis there is a return to pre-crisis conditions; the crisis drives to a renewal of the system along its existing path of development; or the system leads to a new kind of system." From the interviews, and writing in 2021, what the joggers lived through was not a crisis of the first kind. Although joggers associated the end of the lockdown with a sense of utter relieve, the question of what kind of crisis it was is still open.

## 5. Conclusions

This research investigated the urban emotional geography of joggers in Alessandria during the first COVID-19 lockdown. Their experience points to the radical change in everyday life experienced by the interviewees, which passes through adaptation to an emerging context based on weakened sociality and the compression of the individual space. It confirms the crucial role of physical practices in individual well-being before and during the lockdown. It explores the practices undertaken to cope with the anti-COVID public measures and their effects on the perception of jogging and the urban environment shared by the informants. The research shows that the emotional geography of joggers in the lockdown was marked by a sense of growing oppression and rising hostility, against which



they developed coping strategies, which points to a crisis in the model of social life and society on which the joggers relied.

In the months after the research, the national government imposed other periods of lockdown (October 2020–May 2021). However, the most severe restrictions generally ceased to be in force. Physical activity, and especially jogging, has always been allowed since that time, at least within the borders of one's own municipality. Stories of nocturnal runs up and down the condominium stairways were therefore not reported any more, and news reports of assaults against runners and joggers became isolated. This can be considered a good sign for the future, but it does not mean that the pandemic period and the lockdowns came at no cost in terms of how people changed their perception of their surroundings and the strengths of their social ties. These aspects are deeply connected with individual well-being and the very livability of the urban context.

Thus, the research calls for renewed attention to the issue of urban livability, as well as for new urban policies. Whereas in the past the promotion of jogging (along with fast walking or running) in public spaces, conducted individually or in a group, was seen as a winning strategy to ensure well-being and health, the COVID-19 pandemic has shown the limits of this solution. These limits are well described by the voices of the joggers. Thus, questions arise about how to re-think both the access to and the use of urban spaces, negotiating a way forward between collective and individual rights to avoid the pandemic risk and to guarantee equal opportunities for different sectors of society. These interrogatives thus ask for more insight into the role and tools of the state for preserving public health and common well-being, to avoid further social suffering in a context of overall social fragility.

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## Notes

- <sup>1</sup> Overall, the research was conducted from a common perspective to anthropological research in which the researcher is placed within the local reality, being a participant observer of the local context [58]. As pointed out by Bourdieu [59], this perspective is not antithetical to a rigorous social analysis insofar as it is made explicit and the role of the researcher within the research context is objectified. In this sense, my personal experience and involvement with jogging was not a cause of awe or embarrassment, but a factor capable of creating a positive and empathic atmosphere during interviews.

## References

1. Rose-Redwood, R.; Kitchin, R.; Apostolopoulou, E.; Rickards, L.; Blackman, T.; Crampton, J.; Rossi, U.; Buckley, M. Geographies of the COVID-19 pandemic. *Dialogues Hum. Geogr.* **2020**, *10*, 97–106. [\[CrossRef\]](#)
2. Low, S.; Smart, A. Thoughts about Public Space During Covid-19 Pandemic. *City Soc.* **2020**, *32*, 1. [\[CrossRef\]](#)
3. Vannini, P. COVID-19 as Atmospheric Dis-ease: Attuning into Ordinary Effects of Collective Quarantine and Isolation. *Space Cult.* **2020**, *23*, 269–273. [\[CrossRef\]](#)
4. Stewart, K.; Lewis, E. Affect and Emotion, Anthropology of. In *International Encyclopedia of the Social & Behavioral Sciences*, 2nd ed.; Wright, J.D., Ed.; Elsevier: Oxford, UK, 2015; pp. 236–240.
5. Deleuze, G.; Guattari, F. *A Thousand Plateaus: Capitalism and Schizophrenia*; Athlone: London, UK, 1987.
6. Sheehan, G. *Running and Being: The Total Experience*; Simon and Schuster: New York, NY, USA, 1978.
7. Tomlinson, A. Pierre Bourdieu and the Sociological Study of Sport: Habitus, Capital and Field. In *Sport and Modern Social Theorists*; Giulianotti, R., Ed.; Palgrave Macmillan: London, UK, 2004; pp. 161–172.
8. Latham, A. The history of a habit: Jogging as a palliative to sedentariness in 1960s America. *Cult. Geogr.* **2015**, *22*, 103–126. [\[CrossRef\]](#)
9. Gillick, M.R. Health Promotion, Jogging, and the Pursuit of the Moral Life. *J. Health Politics Policy Law* **1984**, *9*, 369–387. [\[CrossRef\]](#)



10. Bauman, Z. *Liquid Life*; Polity Press: Cambridge, UK, 2005; p. 164.
11. Camy, J.; Adamkiewics, E.; Chantelat, P. Sporting Uses of the City: Urban Anthropology Applied to the Sports Practices in the Agglomeration of Lyon. *Int. Rev. Sociol. Sport* **1993**, *28*, 175–185. [\[CrossRef\]](#)
12. Latham, A.; McCormack, D.P. Affective Cities. In *Routledge Handbook of Physical Cultural Studies*; Silk, M.L., Andrews, D.L., Thorpe, H., Eds.; Routledge: London, UK, 2017; pp. 369–377.
13. Dunlap, R.; Rose, J.; Standridge, S.H.; Pruitt, C.L. Experiences of urban cycling: Emotional geographies of people and place. *Leis. Stud.* **2021**, *40*, 82–95. [\[CrossRef\]](#)
14. Smith, M.; Davidson, J.; Cameron, L.; Bondi, L. *Emotion, Place and Culture*; Routledge: London, UK, 2016.
15. Augé, M. *Il Bello Della Bicicletta*; Bollati Boringhieri: Torino, Italy, 2009.
16. Horvath, A.; Szokolczai, A. *Walking into the Void: A Historical Sociology and Political Anthropology of Walking*; Routledge: New York, NY, USA, 2017.
17. Bodin, M.; Hartig, T. Does the outdoor environment matter for psychological restoration gained through running? *Psychol. Sport Exerc.* **2003**, *4*, 141–153. [\[CrossRef\]](#)
18. Karusisi, N.; Bean, K.; Oppert, J.-M.; Pannier, B.; Chaix, B. Multiple dimensions of residential environments, neighborhood experiences, and jogging behavior in the RECORD Study. *Prev. Med.* **2012**, *55*, 50–55. [\[CrossRef\]](#)
19. Stewart, K. *Ordinary Affects*; Duke University Press: Durham, NC, USA, 2007; p. 133.
20. Gervasoni, M. *Storia D'Italia Degli Anni Ottanta: Quando Eravamo Moderni*; Marsilio: Venice, Italy, 2010.
21. Cialdea, L.; Michelini, M. L'intensità dell'attività fisica degli occupati. In Proceedings of the AIQUAV 2018. V Convegno Nazionale dell'Associazione Italiana per gli Studi sulla Qualità della Vita, Fiesole (FI), Italy, 13–15 December 2018; Libro dei Contributi Brevi. di Bella, E., Maggino, F., Trapani, M., Eds.; Genoa University Press: Genoa, Italy, 2019; pp. 83–90.
22. Patucchi, M. Running “partito di maggioranza”, il 51% degli italiani corre almeno una volta al mese. *La Repubblica* **2017**. Available online: [https://www.repubblica.it/sport/running/storie/2017/06/03/news/running\\_partito\\_di\\_maggioranza\\_il\\_50\\_degli\\_italiani\\_corre\\_almeno\\_una\\_volta\\_al\\_mese-167137753/](https://www.repubblica.it/sport/running/storie/2017/06/03/news/running_partito_di_maggioranza_il_50_degli_italiani_corre_almeno_una_volta_al_mese-167137753/) (accessed on 4 October 2021).
23. Marathonworld. Numeri e curiosità. *Marathonworld* **2015**. Available online: <https://www.marathonworld.it/praticanti-running-corsa-maratona-italia-2015.html> (accessed on 4 October 2021).
24. Yin, R.K. *Case Study Research and Applications: Design and Methods*, 6th ed.; Sage: Thousand Oaks, CA, USA, 2018.
25. Cassa di Risparmio di Alessandria. *L'economia Alessandrina Dal Secondo Dopoguerra a Oggi*; Cassa di Risparmio di Alessandria SPA: Alessandria, Italy, 1992.
26. Caramellino, A. L'architettura rurale alessandrina. In *L'architettura Rurale in Provincia di Alessandria*; Caramellino, A., Ed.; Provincia di Alessandria: Alessandria, Italy, 1999; pp. 64–89.
27. Pasquariello, M.; Chiesi, G. L'analisi dei determinanti di un'area territoriale. Studio preliminare in preparazione del Piano strategico per il comune di Alessandria. *POLIS Work. Pap.* **2009**, *152*, 1–121.
28. Comune di Alessandria. *Convegno Turismo Tempo Libero Sport: Alessandria, 29–30 November 1975*; Comune di Alessandria: Alessandria, Italy, 1975.
29. Volpato, G.; Fontefrancesco, M.F.; Gruppuso, P.; Zocchi, D.M.; Pieroni, A. Baby pangolins on my plate: Possible lessons to learn from the COVID-19 pandemic. *J. Ethnobiol. Ethnomed.* **2020**, *16*, 19. [\[CrossRef\]](#)
30. Fontefrancesco, M.F. *Effetto Lockdown: Come Sono Cambiate le Abitudini Alimentari Degli Italiani Durante L'emergenza COVID-19*; Università degli Studi di Scienze Gastronomiche: Bra, Italy, 2020.
31. Fontefrancesco, M.F. The Urban Disease Revealed In Italy. *Anthropol. News* **2020**. Available online: <https://www.anthropology-news.org/articles/the-urban-disease-revealed-in-italy/> (accessed on 4 October 2021).
32. Guigoni, A.; Ferrari, R. *Pandemia 2020. La Vita Quotidiana in Italia Con il Covid-19*; M&J Publishing House: Danyang, China, 2020.
33. Candea, M. Arbitrary locations: In defence of the bounded field-site. *J. R. Anthropol. Inst.* **2007**, *13*, 167–184. [\[CrossRef\]](#)
34. Calhoun, C.J. Toward a Variable Conceptualization for Comparative Research. *Soc. Hist.* **1980**, *5*, 105–129. [\[CrossRef\]](#)
35. Pagliara, F.; Gigliuto, L. *Di Corsa of Course*; Malcors D': Catania, Italy, 2017.
36. Goodman, L.A. Snowball Sampling. *Ann. Math. Stat.* **1961**, *32*, 148–170. [\[CrossRef\]](#)
37. Eisenhardt, K.M. Building Theories from Case Study Research. *Acad. Manag. Rev.* **1989**, *14*, 532–550. [\[CrossRef\]](#)
38. Atkinson, R. The life story interview. In *Handbook of Interview Research*; Gubrium, J.F., Holstein, J.A., Eds.; Sage Publications: Thousand Oaks, CA, USA, 2002; pp. 121–140.
39. Elo, S.; Kääriäinen, M.; Kanste, O.; Pölkki, T.; Utriainen, K.; Kyngäs, H. Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open* **2014**, *4*, 2158244014522633. [\[CrossRef\]](#)
40. Van Maanen, J. *Tales of the Field: On Writing Ethnography*; University of Chicago Press: Chicago, IL, USA, 1988.
41. Hobbs, D. Ethnography. In *The SAGE Dictionary of Social Research Methods*; Jupp, V., Ed.; Sage: London, UK, 2006; pp. 101–103.
42. Ellis, C.; Adams, T.E.; Bochner, A.P. Autoethnography: An Overview. *Hist. Soc. Res. Hist. Soz.* **2011**, *36*, 273–290.
43. Bourdieu, P. *The Weight of the World*; Polity Press: Cambridge, Italy, 1999.
44. Higgins, R.; Martin, E.; Vesperi, M.D. An Anthropology of the COVID-19 Pandemic. *Anthropol. Now* **2020**, *12*, 2–6. [\[CrossRef\]](#)
45. Decorato, F. *AL II Nemico Invisibile*. 2020. Available online: <https://radiogold.it/cronaca/251329-libro-fotografie-alessandria-covid-lockdown-nemico-invisibile-fabio-decorato-csva/> (accessed on 4 October 2021).
46. Deleuze, G. What is a dispositif? In *Michel Foucault, Philosopher: Essays Translated from the French and German*; Armstrong, T.J., Ed.; Harvester Wheatsheaf: New York, NY, USA, 1992.

- 
47. Thrift, N. *Non-Representational Theory: Space, Politics, Affects*; Routledge: London, UK, 2008.
  48. Bourdieu, P. *The Logic of Practice*; Stanford University Press: Stanford, CA, USA, 1990.
  49. Bourdieu, P. *Outline of a Theory of Practice*; Cambridge University Press: Cambridge, UK, 1977; p. 248.
  50. Westheimer, J.; Kahne, J. What Kind of Citizen? The Politics of Educating for Democracy. *Am. Educ. Res. J.* **2004**, *41*, 237–269. [[CrossRef](#)]
  51. di Nardo, F.; Williams, G.; Patterson, L.; Harrison, A.; Verma, A. Current Challenges for Urban Health. *Health Policy Non-Commun. Disease Diabetes* **2017**, *4*, 10–13.
  52. Wacquant, L. *Body and Soul: Notebooks of an Apprentice Boxer*; Reaktion: London, UK, 2003.
  53. Tuan, Y.-F. *Topophilia: A Study of Environmental Perception, Attitudes, and Values*; Prentice-Hall: Engelwood Cliffs, NJ, USA, 1974.
  54. Gruppuso, P.; Whitehouse, A. Exploring taskscapes: An introduction. *Soc. Anthropol.* **2020**, *28*, 588–597. [[CrossRef](#)]
  55. Ahmed, S. Affective Economies. *Soc. Text* **2004**, *22*, 117–139. [[CrossRef](#)]
  56. Granovetter, M.S. The strenght of weak ties. *Am. J. Sociol.* **1973**, *78*, 1360–1380. [[CrossRef](#)]
  57. Walby, S. *Crisis*; Polity Press: Cambridge, UK, 2015.
  58. Spradley, J.P. *Participan Observation*; Waveland Press, Inc.: Long Grove, IL, USA, 1980.
  59. Bourdieu, P. Participant Objectivation. *J. R. Anthropol. Inst.* **2003**, *9*, 281–294. [[CrossRef](#)]